

NASA InterCenter Collaboration Increases ROI

Kimberly Lankford (COLSA), Susan Best (NASA/MSFC), Larry Felton (CSC), Marilyn Newhouse (CSC)

Abstract

Funding for National Aeronautics and Space Administration (NASA) space mission operations is tighter than ever in the current environment of federal government deficit reductions. Conventional wisdom would expect this environment to drive increasing competition between NASA centers for the limited available funds. However, recent inter-center activities at the Huntsville Operations Support Center (HOSC) at NASA's Marshall Space Flight Center emphasize collaboration rather than competition and demonstrate the value of partnerships to increase the return on shrinking investments. These efforts cover a variety of activities and potential returns. To facilitate sharing data from test and verification through operations without levying requirements on data format or software tools, the HOSC is working with multiple centers on an evolutionary path toward a distributed data architecture and archive. The approach reduces the required investment by allowing the partners to reuse their existing formats and tools, while facilitating "one-stop" user visibility into and controlled access to the full complement of data regardless of user or data location. The HOSC is also working on two activities to promote sharing operations implementations and leveraging the experts and expertise across multiple NASA sites. In one, the use of Consultative Committee for Space Data Systems (CCSDS) standards for the message abstraction layer provides an interoperability layer on top of existing ground data system communication architectures. This allows missions to select the most appropriate solutions for their requirements with a minimal investment in rehosting the components in a coherent operational environment. The other emphasizes shared tools and increased remote access to minimize travel for tests and critical activities and reduce the floor space required for a dedicated operations center. This paper summarizes these and other inter-center collaboration activities at the HOSC and the benefits that each can bring, not just to the participants, but to the broader operations community.